Comparing Extremist Perpetrators of Suicide and Non-Suicide Attacks in the United States

Joshua D. Freilich, William S. Parkin, Jeff Gruenewald & Steven M. Chermak

Published online: 22 Mar 2017.

Submit your article to this journal ⎘

Article views: 2

View related articles ⎘

View Crossmark data ⎘

Routledge
Taylor & Francis Group

Comparing Extremist Perpetrators of Suicide and Non-Suicide Attacks in the United States

Joshua D. Freilich[a], William S. Parkin[b], Jeff Gruenewald[c] and Steven M. Chermak[d]

[a]John Jay College, Criminal Justice, New York, New York, USA; [b]Seattle University, Criminal Justice, Seattle, Washington, USA; [c]Indiana University-Purdue University Indianapolis, School of Public and Environmental Affairs, Indianapolis, Indiana, USA; [d]Michigan State University, Criminal Justice, East Lansing, Michigan, USA

ABSTRACT

This study explores differences in perpetrators of suicide attacks and non-suicide attacks in the United States. The study uses data on far-right and Al Qaeda and affiliated/inspired terrorists between 1990 and 2013 from the United States Extremist Crime Database. Our analysis estimates logistic regression models to test whether suicide attackers were more likely to have exhibited specific risk factors for suicidality, while examining other prominent claims regarding patterns of suicide terrorism. Suicide attackers were no more likely than non-suicide attackers to have previously attempted suicide or to have been diagnosed as mentally ill. Suicide attackers were more likely, though, to have a history of substance abuse, to be loners, have served in the military, participated in paramilitary training, and be more ideologically committed to the cause. We found that Al Qaeda affiliated/inspired attackers were more likely than far-right attackers to have engaged in a suicide mission. With the current focus on Americans traveling to Syria and Iraq to receive training and fight for jihadist movements (e.g., the Islamic State), our findings appear relevant. Observers have expressed concern that these fighters may return and then commit attacks in their homeland. Law enforcement could make use of this study's findings.

Introduction

In June of 2016, a man entered Pulse, an LGBTQ nightclub in Orlando, Florida, and murdered 49 people. Two years earlier, a married couple executed two Las Vegas police officers who were eating lunch and, subsequently, a civilian who attempted to intervene. In both incidents, the offenders, who were killed by law enforcement, were motivated by extreme ideological beliefs, and there is evidence that they knew their actions would lead to their own deaths. The murderer of the nightclub patrons claimed allegiance to the Islamic State and was described by law enforcement as being prepared to die for it. The couple that murdered the law enforcement officers posted messages on social media about their extreme ideological views, hatred of the government, and their upcoming attack where they expected to sacrifice themselves (i.e., they expected to be killed) for their cause. Although research has been conducted on suicide perpetrators in other parts of the world, to date there has been no systematic examination of

CONTACT Joshua D. Freilich ✉ jfreilich@jjay.cuny.edu ✉ John Jay College, Criminal Justice, 899 10th Avenue, New York, New York, USA

suicide attackers who are ideologically motivated and engage in this type of criminal behavior within the United States.

As we explain below, there is a debate in the literature as to how to define suicide missions and perpetrators. We discuss this more fully in the data and methods section. Importantly, as we also discuss below, we have identified 56 suicide attackers in the United States since 1990. While 19 of these attackers were involved in the four attacks on 9/11, we also identified 37 other suicide attackers. The suicide attackers we identified included over 40 supporters of Al Qaeda but intriguingly also encompassed 14 far-right terrorists. These suicide offenders use a range of weapons including explosives, guns, cars, and airplanes. These suicide attackers also targeted a variety of targets including stadiums, government buildings, a church, and the general public, among others. Again, we expand upon these points in the data and methods section and in Appendix 1 below. This study explores differences in terrorist perpetrators of suicide attacks and non-suicide attacks in the United States. It provides an original test of whether suicide attackers in the United States were more likely than non-suicide offenders to have exhibited several specific risk factors for suicidality. The study also examines several other prominent claims regarding patterns of suicide terrorism[1] and focuses on ideologically motivated violent attacks committed by members of far-right (FR) and Al Qaeda and affiliated movements (AQAM) since 1990. We operationalize these movements in the data and methods section. These movements are widely viewed by law enforcement and others as the leading threats to the American public.[2]

It is important to study suicide attackers for many reasons. First, suicide attacks have been found to be more deadly than other forms of terrorism. Though representing only three percent of all terrorist attacks, suicide strikes accounted for 20 percent of terrorism fatalities in 2005.[3] For this reason, the potential for future suicide attacks garners increased law enforcement attention and leads to widespread social trepidation or panic.[4]

Second, in the last 30 plus years, suicide tactics have spread across the globe and to new groups.[5] For example, the number of suicide bombings in Iraq increased from five in 2002 to 50 per month in 2013.[6] One reason for the popularity of this tactic is that terrorists believe that it effectively furthers their goals,[7] as they are inexpensive to mount and more difficult than non-suicide attacks to prevent. Hamas's suicide bombing campaign in the mid-1990s, which some argue was largely responsible for derailing peace talks in the Israel/Palestine dispute, is a demonstration of their effectiveness.[8]

Third, recently there has been an increase in studies on suicide attacks and their perpetrators, and a growing number of these works have relied upon systematically collected data.[9] Some of these studies have also relied upon comparison groups of non-suicide cases There is a need to continue to use this research strategy since it will allow us to uncover the factors unique to suicide attacks.[10] It is especially important to continue to investigate Lankford's recent conclusion that "suicide terrorists are not necessarily a representative sample of the much larger terrorist population ... [and] that there are fundamental differences between suicide and non-suicide terrorists,"[11] as implications for homeland security policies and programs may depend on the type of terrorism.

Fourth, Merari[12] points out that the conclusions drawn from the few existing empirical studies on this topic are based on a handful of conflicts, such as the enduring Israel and Palestine conflict, or violence in Sri Lanka and Lebanon. It is unclear if the findings of these studies are generalizable to other conflicts or nations. The lack of focus on the

American context is surprising given that one of the most deadly suicide attacks in history occurred in the United States on September 11, 2001.

This study seeks to fill research gaps by comparatively examining suicide attackers and non-suicide perpetrators in the United States. The study builds upon the few empirical studies on suicide and non-suicide attacks conducted in non-American contexts,[13] and the perpetrators of these attacks,[14] to identify important differences.

Literature review and hypotheses

Suicide attacks are not new but instead have a long and varied history. Suicide attackers have relied upon a variety of weapons, ranging from conventional firearms to airplanes, to carry out their deadly acts. In some instances, attackers' deaths were necessary for the success of their strikes. Other times, attackers made no attempt to escape and expected to perish during their missions.[15] While accounts of suicide attackers provide rich historical context for understanding suicide terrorism, they tell us little about whether suicide attackers vary from non-suicide attackers in important ways. To date, there is a gap between the vastness of claims about suicide attackers and the paucity of findings that have been derived empirically. This study provides an overview of this limited research by presenting the findings of prior studies relevant to the ways in which suicide and non-suicide offenders may differ. Based on this research, we derive hypotheses related to the uniqueness of suicide attackers, which we believe is an important step in validating the uniqueness of suicide attacks and informing existing counter-terrorism policies.

The first hypothesis is that *suicide perpetrators are more likely than non-suicide perpetrators to have been suicidal* (H$_1$). This premise has become controversial. Until recently, the conventional wisdom among terrorism scholars was that suicide perpetrators were *not* suicidal. It was assumed that most suicide attackers acted upon different motivations than persons committing regular suicide.[16] Pape[17] explains that,

> our experience with ordinary suicide leads to a common misunderstanding about suicide terrorists: that many are seeking to end their lives in any case and are merely taking an opportunity to die in an especially theatrical way. This presumption is a mistake. Many suicide terrorists are acting on the basis of motives fundamentally different from those that underlie ordinary suicide and would probably not commit suicide absent the special circumstances that create these motives.

Recently, however, scholars have challenged this orthodoxy.[18] Lankford[19] contends that suggesting suicide terrorists are rarely suicidal is based upon circular reasoning. Based on a list of 136 suicide terrorists, he found that many exhibited suicide risk factors (e.g., depression, substance abuse, PTS disorder, past suicide attempt) for suicide.[20] Holmes[21] also suggests how religiously motivated suicide terrorists can be suicidal. While persons contemplating suicide may typically be dissuaded by religious forbiddances of suicide, Holmes[22] speculates that one way for "individuals inclined to kill themselves [to] get around such powerful prohibitions … [would be to] enlist in a cause that re-describes suicide as honorable, pious and heroic, as self-sacrifice for a 'higher' cause."

Merari[23] directed an innovative study on the perpetrators of suicide attacks that compared 15 thwarted Palestinian suicide bombers to a control group of 12 Palestinian terrorists who were imprisoned for non-suicide attacks. After matching both groups on the attributes of age,

length of time imprisoned, education, marital status, and organizational affiliation, Merari used validated psychological instruments to compare them and had clinical psychologists interview the perpetrators in Arabic. Merari's research uncovered important differences, including that 40 percent of the suicide attackers demonstrated suicidal tendencies, compared to *none* of the non-suicide perpetrators.

The second hypothesis is that *suicide perpetrators are more likely than non-suicide perpetrators to be members of an organization, as opposed to lone unaffiliated supporters of terrorist movements* (H₂). Many prior studies of suicide attackers have reached this conclusion.[24] Ganor[25] explains that suicide attacks are "effective and very beneficial from the point of view of the terrorist organizations that initiate, plan, prepare and execute these attacks." For Ganor, this is why most suicide attacks have been organized and not committed by lone actors. Dishman,[26] on the other hand, suggests that lone wolves are actually more likely to be suicide attackers than terrorists who are more closely associated with groups.

The third and fourth hypotheses are that *suicide perpetrators are more likely than non-suicide perpetrators to be poorer, more economically deprived persons* (H₃); and that *suicide perpetrators are more likely than non-suicide perpetrators to be less educated* (H₄). Although most terrorism researchers agree that poverty is unrelated to terrorism,[27] some have concluded that there may be exceptions. Studies have found American far-right terrorists to be poorer than other terrorists and the general public.[28] Others have argued that persons residing in troubled economic circumstances are more likely to become suicide attackers.[29] A number of studies examining Palestinian suicide bombers indicate that offenders tended to originate from poorer territories, were more deprived, and less educated.[30] Importantly, though, the results of several other studies remain at odds with these hypotheses. Some suggest that there are little or no differences in the socioeconomic statuses of suicide and non-suicide attackers, and others claim that suicide perpetrators are wealthier than non-suicide attackers.[31] Merari's comparison found that suicide perpetrators' family economic level was higher than the non-suicide attackers.[32]

This study's fifth hypothesis is that *suicide perpetrators are more likely than non-suicide perpetrators to have committed prior crimes (both ideologically motivated and non-ideologically motivated offenses)* (H₅). Suicide attackers are considered fervently committed to the movement and intend to sacrifice their lives for the cause. More committed terrorists are more likely to have committed previous ideologically motivated crimes to further their respective movements.[33] In addition, suicide attackers may perceive themselves as "stained by various sins" due to involvement in prior non-ideologically motivated crimes.[34] Terrorists feeling guilty over personally motivated crimes from the past may want to purify themselves from their previous transgressions. One way to expunge past misdeeds, while also furthering the cause, is to become a suicide attacker.[35]

The next hypotheses focus on the personal characteristics of terrorists, including marital status, gender, and age. It is predicted that *suicide perpetrators are more likely to be unmarried than non-suicide perpetrators* (H₆)[36] and that *suicide perpetrators are more likely to be younger than non-suicide perpetrators* (H₇).[37] Pedahzur explains the logic behind these two claims and writes that "[terrorist] organizations generally prefer to recruit young adults and youths who are not attached to family or have other commitments."[38] Studies on both Palestinian and LTTE Tamil suicide attackers have found that they are typically younger.[39] In addition to single persons who have never

married, divorced individuals may also be more "susceptible to recruitment to a suicide assignment" following personal crises and the loss of significant connections.[40]

The eighth hypothesis is that *suicide perpetrators are more likely than non-suicide perpetrators to have received military, paramilitary, or other types of specialized training* (H_8).[41] Media outlets have long speculated that homegrown terrorists who trained or participated in combat overseas with AQAM groups pose a threat as they may subsequently commit suicide attacks in the United States. Similarly, as the description below of the far-right movement indicates, many far-rightists encourage participation in paramilitary and military training. The goal of training is to teach skills needed to defend the homeland against internal enemies who seek to enslave the American people. The assumption behind this hypothesis is that more capable persons who are better able to successfully carry out suicide attacks are specifically selected or volunteer for these trainings. This argument also suggests that offenders who are more committed to the cause tend to volunteer (or are recruited) for both trainings and suicide attacks to sacrifice themselves for the cause.[42] For this reason, the last hypothesis is that *suicide perpetrators are more likely than non-suicide perpetrators to be strongly committed to the cause; i.e., their extreme ideological beliefs* (H_9).[43]

Here is a summary of the hypotheses:

H_1: Suicide perpetrators are more likely than non-suicide perpetrators to be suicidal

H_2: Suicide perpetrators are more likely than non-suicide perpetrators to be members of an organization as opposed to lone wolves, unaffiliated supporters of terrorist movements

H_3: Suicide perpetrators are more likely than non-suicide perpetrators to be poorer, more economically deprived persons

H_4: Suicide perpetrators are more likely than non-suicide perpetrators to be less educated persons

H_5: Suicide perpetrators are more likely than non-suicide perpetrators to commit prior crimes (both ideologically motivated and non-ideologically motivated offenses)

H_6: Suicide perpetrators are more likely than non-suicide perpetrators to be single (i.e., unmarried)

H_7: Suicide perpetrators are more likely than non-suicide perpetrators to be younger

H_8: Suicide perpetrators are more likely than non-suicide perpetrators to have received military or paramilitary training

H_9: Suicide perpetrators are more likely than non-suicide perpetrators to be strongly committed to the cause

Data and methods

Dependent variable

This study focuses on terrorist perpetrators of ideologically motivated violent crimes committed in the United States between 1990 and 2013. The analysis is not limited to supporters of Al Qaeda and affiliated movements (AQAM)[44] because the suicide attack tactic has been used by a variety of terrorist movements. As Crenshaw notes, "today's threat stems from the powerful association between jihadist beliefs and suicide tactics, but radical Islamists do not own the method."[45] The study therefore also includes far-right[46] terrorist offenders (who are considered a top threat to public safety) and secular Middle Eastern nationalist[47] perpetrators of violent ideologically motivated crimes in the United States. This study also pays heed to Moghadam's observation that "all suicide bombings are suicide attacks, but *not all suicide attacks are suicide bombings.*"[48] As a result, this paper's categorization of suicide attackers is not limited to perpetrators who have committed bombings, but includes offenders who committed, or attempted, shootings, stabbings, and other ideologically motivated attacks.

Currently, there is no agreed-upon definition of what constitutes a suicide mission or suicide perpetrator. Weinberg, Pedahzur, and Canetti-Nisim[49] set forth a narrow definition that operationalizes suicide missions as an "operational method in which the very act of the attack is dependent upon the death of the perpetrator" and these "missions could only be completed if these individuals killed themselves." Pedahzur, Perlinger, and Weinberg note that a suicide attack "was defined as an act in which the death of the perpetrator constituted an integral part of the operation and as necessary for its accomplishment."[50] In other words, the perpetrator had to die for the operation to succeed.

Other studies use a broader definition of suicide attack and suicide offender. Seifert and McCauley describe an operationalization of suicide attackers as individuals committing ideologically motivated attacks who "expected to die in the attack."[51] Merari similarly defines suicide terrorism as "the readiness to die in the process of committing a terrorist act"[52] (though more recently Merari[53] has adopted the narrow definition). Cook also concludes that "the balance of the traditions emphasizes the idea that one who attacks an enemy either alone or in a manner which makes it *unlikely* [italics added] that he will survive … is indeed a martyr."[54]

This broader definition guided the inclusion criteria of the current study. To create the dependent variable we queried data from the open-source United States Extremist Crime Database (ECDB) in November, 2014. The ECDB is a thorough relational database that tracks all publicly known violent and financial crimes committed by extremists in the United States since 1990. A two-prong inclusion criteria requirement is employed for all terrorist events examined in this study. First, a violent crime must have been committed in the United States (a behavioral requirement) since 1990. Second, at the time of the crime at least one of the offenders must have subscribed to a far-rightist or AQAM ideology (attitudinal requirement). Further, hearsay is not enough. For all included cases, the terrorist must have been convicted of the crime, or was unable to be tried because they died before court proceedings began.

The ECDB collects information on multiple units of analysis including the offender-level, victim-level, incident-level, and the organization-level (if a group was involved). The ECDB's incident identification and coding is a multi-stage process. First, open-source

publications (e.g., the FBI, GTD, and Southern Poverty Law Center's Intelligence Report) and databases are used to identify cases that could fit the inclusion criteria. Additional incidents are identified in online newspaper articles. After potential incidents are identified they are searched in more than 30 web-engines to collect all publically available information on them. A coder then verifies that the incident met the inclusion criteria, conducts additional open-source searches, and codes each incident. This coding process was iterative and reliability was increased through coder training and multiple coders examining each incident.[55]

Importantly, the ECDB has proved to be a valid source of data on fatal ideologically motivated attacks committed by terrorists in the United States.[56] Recent studies have relied on the ECDB to examine violent extremist and terrorist groups,[57] extremist attacks against the police,[58] county-level variation in attacks,[59] and honor killings.[60]

We first identified all violent ideologically motivated incidents that were committed by AQAM, far-right, and secular Middle Eastern nationalists in the United States between January 1, 1990 and December 31, 2013.[61] These incidents included AQAM ideologically motivated homicides (n = 35) and violent foiled plots intended for specific targets (e.g., the President) or general target types (e.g., transportation hubs) (n = 196), secular Middle Eastern nationalist homicides (n = 2), and far-right homicides (n = 154). We then identified 447 unique, ideologically motivated perpetrators who committed these crimes, which includes 274 far-right offenders, 170 AQAM offenders, and three secular Middle Eastern nationalist offenders.[62]

Next, open-source information was reviewed on each of these attacks. Based on evidence from these materials, we applied our definition of suicide attacker and every offender who killed themselves during the attack or immediately afterwards, and/or expected to be killed during the attack was coded as 1, a suicide offender (n = 56, including 14 far-right, 41 AQAM, and one secular Middle Eastern nationalist). Perpetrators who did not expect to be killed during the mission were coded as 0, non-suicide offenders (n = 391, including 261 far-right, 128 AQAM, and two secular Middle Eastern nationalists). Not all offenders killed by the police were classified as suicide attackers. Such offenders were only categorized as suicide attackers if the open source information indicated that before they embarked upon the attack they expected to be killed during it.

Appendix 1 provides a description of each suicide attack. The appendix notes whether the perpetrator(s) satisfied the broad or narrow definition of suicide attacker.[63] In total, 56 suicide attackers met our definition. The narrow suicide attackers included the 19 perpetrators of the four 9/11 attacks and six other offenders. Two of these other offenders killed themselves during their attacks that used planes to attack buildings. A third blew himself up outside of a stadium. Two others attempted, but ultimately failed, to set off bombs on airplanes mid-flight. The final offender was carrying what he thought was a bomb to blow himself up at an iconic target. The other 31 suicide attackers satisfied our broader definition of a suicide attacker. These attackers left notes or other messages that they did not expect to survive their attacks or they committed the attacks and then committed suicide.

Independent variables

Three independent variables were chosen to test whether an offender was suicidal. The first variable measured whether the offender had a history of diagnosed mental illness that

was recorded in the open-source documents. This could range anywhere from depression to schizophrenia. Lankford mentions these ailments as possible indicators of suicidal tendencies. Importantly, coupled with this variable was whether the offender had attempted suicide in the past. These attributes were combined into one dichotomous variable, which was coded as Yes if one or both of these variables were present and No if neither attribute was present. The study also captured whether the offender had a history of substance abuse, again coding the response with a Yes or No.

For the second hypothesis, which predicts that suicide perpetrators are more likely than non-suicide perpetrators to be members of a terrorist organization, a variable was developed that captures whether the offender engaged in the crime alone *and* was not part of an organization. These offenders were coded as Yes for the loner variable. The third hypothesis predicts that suicide perpetrators were more likely to be economically deprived. Multiple variables from the ECDB were combined to capture this deprivation construct. Any offender who had low community status, a low paying job, was unemployed, or homeless, was coded as Yes for this dichotomous variable. Thus, offenders who were unemployed and homeless were weighted the same weight as offenders who were only unemployed. This crude measure of deprivation is the best way to capture this construct with existing variables, as they are highly correlated measures.

The fourth variable measures educational status, or whether the offender had received their high school diploma or its equivalency. An offender with a high school degree or equivalent was coded as a Yes, while those without were coded as a No. It is also predicted that suicide offenders are more likely to have a criminal history, which is captured by coding the offender as Yes if any information about a criminal history, whether ideologically motivated or not, is reported in the open-source data. Other demographic characteristics include the offender's marital status and age. These are measured with two dichotomous variables that capture whether an offender is married (Yes, No), 25 years of age or older (Yes, No). Age was dichotomized for two reasons. First, the specificity of the data for some suspects was not precise enough to assign a specific age. For example, some reports might state that the suspect was a juvenile or only provide a birth year instead of an actual age. Second, theoretically it was important to measure whether the suspect was within their prime offending years when they committed the act or were arrested. Although the precise definition of what an individual's prime offending years are varies, based on the distribution of our age variable as well as the current research on the relationship between age and offending, we decided to capture whether the suspect was 25 years of age or older.

The last two hypotheses examine an offender's prior training and commitment to terrorist movements. To capture this construct, two variables were used from the ECDB, including whether the offender had any documented military service and whether they received any training from a terrorist movement, whether organized or unofficial. These two variables are measured with either Yes, training or military service occurred, or No, such training did not occur. For the commitment to a movement, the ECDB collects multiple pieces of information that support a claim that an offender is a terrorist. For the purposes of this study, this variable is measured dichotomously, whereas High Ideological Commitment means the offender was strongly committed to the cause and multiple indicators that demonstrated ideological extremism were identified. Examples of evidence of extremism include offender statements (including oral and written; and both off and online) supporting an extremist ideology,

statements by law enforcement or others with knowledge that the offender was a terrorist, an offender's tattoos (e.g., a Swastika) indicating support for an extreme ideology, and periodicals and books promoting extreme ideological positions (works by bin Laden or Hitler, for example) in the offender's possession. All other terrorists included in this study were coded as Low Ideological Commitment. For these offenders, only a single ideological indicator was identified or evidence was also found to counter a suspect's commitment to a terrorism movement, or both. Common examples of counter evidence include statements by defense attorneys and family members who suggest that offenders are not racist, radicalized, or in some way followers of an extremist ideology.

We also included three control variables in the model—whether the offender was a far-right terrorist (Yes, No), whether they were involved in a homicide incident (Yes, No), and their gender, whether they were male (Yes, No). Although we have not hypothesized about ideological motivations for choosing a suicide attack over a non-suicide attack, we have chosen to control for the effect of ideology on tactic choice. Also, we chose to control for the type of incident, coding each offender based on whether they were involved in a homicide incident where an individual was killed instead of a foiled plot. The third control variable was included because almost all prior empirical studies have found that suicide perpetrators are more likely to be males.[64] Finally, missing values were not an issue in the analyses because we coded our attributes dichotomously to minimize missing-ness. An indicator was only coded as present, or "1" if evidence of it was reported in the open-source materials. This coding decision means that the default response for all indicators was NOT present, or "0," unless the open sources contained evidence that it was present. This is necessary when working with open-source materials because often a negative response will not be reported in a journalistic source. For example, a news source is not as likely to report that an offender is single as they would their married status. It is important for scholars and others to keep this coding strategy in mind when they interpret our findings.

We analyzed these variables and presented them in two ways across four tables in the results section. For the bivariate relationships between the dependent and independent variables, the chi-square measure of association was utilized. In addition, four multivariate logistic regression models were conducted to examine the relationships between the independent variables and whether the suspect was, or was not, a suicide mission suspect, as well as a follow-up analysis to determine whether there were significant differences between offenders based on their ideology.

Results

There were 447 ideological offenders connected to either an ideologically motivated homicide incident or an ideologically motivated failed or foiled plot. Of those offenders, 56 either engaged in a suicide mission or evidence was uncovered that they had planned to engage in a suicide mission if their plot had not failed or been foiled by law enforcement.

Table 1 presents the percentages of offenders and the characteristics under study across those who were connected to a suicide mission and those who were not. For comparison purposes, the table also includes the percentage of characteristics for all offenders in the study. A chi-square statistic was calculated to determine whether there was a significant association between the dependent variable and each independent variable. Specifically, did the distribution of the observed values vary significantly from the distribution of expected values? A significant association only existed between whether the offender was a

suicide mission perpetrator and whether they were a loner, received movement training, had a criminal history, had a high ideological commitment, their educational level, and their ideology, though military service approached significance.

For the significant associations, 30.4 percent of perpetrators who had engaged in suicide missions were loners, compared to 18.9 percent of those who had not. Approximately 46 percent of suicide mission perpetrators had received some type of additional training related to the movement, while only 5.4 percent of non-suicide mission perpetrators had such training. Suicide mission perpetrators were also less likely to have a criminal history compared to non-suicide mission perpetrators, 25 to 39.4 percent, respectively. Other significant associations at the bivariate level indicated that suicide mission offenders were more likely to have a high ideological commitment (75% versus 49.9%) and lower levels of education (48.2% versus 78.3%). Finally, the ideology control variable shows that the AQAM/Secular Arab offenders were more likely to be suicide perpetrators (76.8%) compared to far-right offenders (23.2%).

We should also note that after coding our dependent variable two-thirds of non-suicide mission offenders were far-rightists, while only one-third were AQAM or Secular Nationalist offenders. For the broad definition of suicide offenders, more than one-third were far-right (35.3%) and almost two-thirds were AQAM/Secular (64.7%). Finally, for the

Table 1. Percent distribution of characteristics across suicide mission and non-suicide mission suspects.^

Independent Variable		Suicide Mission (n = 56)	Non-Suicide Mission (n = 391)	All (n = 447)
Diagnosed/mental illness/prior suicide attempt	Yes	14.3	11.5	11.9
	No	85.7	88.5	88.1
History of substance abuse	Yes	17.9	14.6	15.0
	No	82.1	85.4	85.0
Loner: acted alone w/no group affiliation*	Yes	30.4	18.9	20.4
	No	69.6	81.1	79.6
Evidence of deprivation	Yes	25.0	29.2	28.6
	No	75.0	70.8	71.4
Military service+	Yes	14.3	7.7	8.5
	No	85.7	92.3	91.5
Movement training***	Yes	46.4	5.4	10.5
	No	53.6	94.6	89.5
Criminal history*	Yes	25.0	39.4	37.6
	No	75.0	60.6	62.4
High ideological commitment***	Yes	75.0	49.9	47.0
	No	25.0	50.1	53.0
High school diploma or higher***	Yes	48.2	78.3	74.9
	No	51.8	21.7	25.1
Marital status	Married	19.6	16.4	16.8
	Not married	80.4	83.6	83.2
Age	25 or over	48.2	51.4	51.0
	Under 25	51.8	48.6	49.0
Ideology***	Far-right	23.2	66.8	61.3
	AQAM/Secular Arab	76.8	33.2	38.7
Incident type	Homicide	66.1	73.4	72.5
	Failed/foiled plot	33.9	26.6	27.5

+p < .1; *p < .05; **p < .01; ***p < .001
^Bivariate relationship accessed using X^2 statistic.

narrow definition of suicide missions, these were almost exclusively AQAM/Secular offenders (95.5%).

Logistic regression was used to assess the multivariate relationship between the dependent variable and independent variables. Turning to Table 2, we first note that it excluded the gender control variable. We did so because when we initially included gender, it had a disproportionate impact that resulted in unusually large Exp(B) values and inflated standard errors as almost all offenders are male. The full multivariate model without gender was significant at the .001 significance level, with a chi-square statistic value of 119.5. The Nagelkerke R^2, a pseudo R^2 measurement, was 0.443. Seven of the 14 independent variables were significant, with one additional variable approaching significance. Interestingly, the bivariate relationship observed between education and offender type, and criminal history and offender type, disappears in the multivariate model, while several other variables become significant. Specifically, suicide mission offenders were nearly 3 times more likely to have a history of substance abuse, 3.9 times more likely to be loners, 3.7 times more likely to have served in the military, 13 times more likely to have received movement training, and almost 2.5 times more likely to have a high commitment to their ideology. For the control variables, suicide mission offenders were significantly less likely to be far-rightists and more than 3.5 times more likely to have been involved in a homicide incident. Although only approaching significance, the model also shows that, when controlling for all other variables, suicide mission suspects were less likely to be under the age of 25.

Sensitivity analyses

Finally, we conducted three sub-analyses to place the results in context. We first look at the final multivariate model in Table 2. Since there was little variation between the suicide mission perpetrators responsible for the terrorist attacks of September 11, 2001, we reran the binary logistic regression aggregating the 19 perpetrators into one observation. The results of the multivariate model with the 9/11 offenders aggregated were consistent with

Table 2. Logistic regression models predicting suicide mission from non-suicide mission suspects.

Predictors	Full Multivariate Model (n = 447)			Multivariate Model 9/11 Aggregate (n = 429)		
	Exp(B)	S.E.	Sig.	Exp(B)	S.E.	Sig.
Diagnosed mental illness/Past suicide attempt	1.315	(0.531)		1.161	(0.534)	
Substance abuse	2.955	(0.512)	*	2.796	(0.505)	*
Loner	3.887	(0.444)	**	3.895	(0.437)	**
Deprivation	1.008	(0.426)		1.156	(0.418)	
High school degree	1.132	(0.397)		1.073	(0.422)	
Married	0.723	(0.475)		0.860	(0.501)	
25 and over	0.482	(0.401)	+	0.553	(0.425)	
Military service	3.689	(0.519)	*	3.420	(0.518)	*
Movement training	13.032	(0.498)	***	6.406	(0.562)	**
Criminal history	0.635	(0.416)		0.739	(0.413)	
High ideological commitment	2.473	(0.404)	*	1.889	(0.406)	+
Far-right	0.070	(0.573)	***	0.148	(0.648)	**
Homicide incident	3.578	(0.463)	**	1.574	(0.562)	

+p < .1; *p < .05; **p < .01; ***p < .001 X^2 = 119.5*** X^2 = 50.4***
Naglekerke R^2 = 0.443 Naglekerke R^2 = 0.246

the results of the full model. Although the coefficients changed slightly in magnitude, they did not change in direction, and only one variable of theoretical interest, whether the perpetrator's ideological commitment was high, became insignificant.

Next, Table 3 details the results of a logistic regression analysis between suspects based on whether or not they adhered to a far-right ideological or an AQAM or secular Middle Eastern ideology. The purpose of this analysis is to guide our interpretation of our results by determining whether there are any individual-level differences based on suspect ideology while controlling for our prior dependent variable of interest—whether they engaged in a suicide mission—and the independent variables. The results of two models, a full model and a model with the 9/11 suspects aggregated into one individual, are presented where for the outcome variable far-right offenders were coded as 1 and AQAM/secular Middle Eastern offenders were coded as 0. The results show that far-right suspects are significantly more likely to be economically deprived, have had military service, and have a high level of ideological commitment, compared to AQAM and secular nationalist Arab suspects. On the other hand, AQAM suspects were significantly more likely to have engaged in a suicide mission, received a high school degree or higher, be married, be over the age of 25, and to have received some type of movement-related training. The odds of being suicidal, having a substance abuse problem, being a loner, or having a criminal history, did not significantly vary between the suspects based on their ideological motivation. Importantly, the results of the multivariate model with the 9/11 offenders aggregated were consistent with the results of the full model.

Finally, Table 4 presents the distribution of each variable for suicide mission perpetrators, separated by whether the perpetrator met the broad or narrow definition of suicide terrorism. We conducted this additional analysis to examine whether differences between individuals who engaged in the two types of suicide missions were driving the results of the multivariate logistic regression. For Table 4, although the size of each group was relatively small, we were still able to calculate chi-square statistic results to examine the relationship between each independent variable and whether the suspect fit the broad or narrow definition of suicide missions. Seven of the independent and control variables had

Table 3. Logistic regression models predicting far-right from AQAM/secular Arab suspects.

Predictors	Full Multivariate Model (n = 447)			Multivariate Model 9/11 Aggregate (n = 429)		
	Exp(B)	S.E.	Sig.	Exp(B)	S.E.	Sig.
Suicide mission	0.198	(0.448)	***	0.244	(0.458)	**
Diagnosed mental illness/Past suicide attempt	1.249	(0.407)		1.285	(0.408)	
Substance abuse	1.834	(0.410)		1.830	(0.412)	
Loner	0.686	(0.312)		0.670	(0.311)	
Deprivation	1.910	(0.295)	*	1.896	(0.293)	*
High school degree	0.209	(0.295)	***	0.214	(0.296)	***
Married	0.404	(0.333)	**	0.369	()0.331	**
25 and over	0.410	(0.269)	**	0.408	(0.269)	**
Military service	3.750	(0.482)	**	3.316	(0.483)	*
Movement training	0.139	(0.543)	***	0.195	(0.552)	**
Criminal history	1.429	(0.266)		1.373	(0.266)	
High ideological commitment	1.990	(0.249)	**	2.101	(0.249)	**

+p < .1; *p < .05; **p < .01; ***p < .001
X^2 = 165.4***; X^2 = 133.6***
Naglekerke R^2 = 0.420; Naglekerke R^2 = 0.367

Table 4. Percent distribution of characteristics across broad and narrow definitions of suicide missions.^

Independent Variable	Broad (n = 31)	Narrow (n = 25)
Diagnosed mental illness/Prior suicide attempt	19.4	8.0
Substance abuse+	25.8	8.0
Loner**	45.2	12.0
Deprivation**	38.7	8.0
High school diploma	45.2	52.0
Married	22.6	16.0
25 or over	54.8	40.0
Military service**	25.8	0.0
Movement training***	12.9	88.0
Criminal history**	38.7	8.0
High ideological commitment	66.7	84.0
Far-right**	38.7	4.0
Homicide incident*	51.6	84.0

+p < .1; *p < .05; **p < .01; ***p < .001
^Bivariate relationship accessed using X^2 statistic.

a significant bivariate relationship with the dependent variable. Specifically for the theoretical variables of interest, perpetrators who fit the broad definition of suicide terrorism more often were loners, suffered from deprivation, had military service, and a criminal history. Also, they less often had movement training. These results are contextualized in the following section.

Discussion

The findings demonstrated limited support for the suicidal thesis. Suicide perpetrators were not significantly more likely than non-suicide perpetrators to have attempted suicide or to be diagnosed as mentally ill, which were the most direct measures of the suicidal claim. Substance abuse, a third measure that has been linked to the suicidal thesis, was significant. Suicide attackers had higher odds than non-suicide attackers of being substance abusers. Our sensitivity analysis also found that the odds of an offender having attempted suicide, being mentally ill, or having a substance abuse problem did not significantly vary across far-right and AQAM suspects. Although the suicidal thesis has recently garnered much attention, most prior empirical tests did not compare suicide attackers to non-suicide perpetrators. While it is interesting to investigate if suicide attackers are more suicidal than school shooters or other categories of offenders, such comparisons are unable to identify if this characteristic differentiates suicide terrorists from other terrorists.

One possible critique is that this study did not completely test the suicidal thesis. The difficulty is that "suicidality" is not a specific diagnosable condition.[65] Suicidal gestures could be part of a variety of mental disorders, such as depression, schizophrenia, and borderline personality disorder. None of these diagnoses though require suicidal gestures or thoughts. Further, suicidal gestures or threats may not fall into part of any mental disorder. Pedahzur, Perlinger, and Weinberg[66] remind us that Durkheim's suicide typology included altruistic suicides where mental illness was not expected to play a role.

Lankford[67] writes that suicidal thoughts and discussion of possible suicide are additional measures of an individual being suicidal. This study limited its focus to past suicide

attempts, a diagnosed history of mental illness, and substance abuse because these attributes refer to behaviors that are more likely to be picked up by open sources. Suicidal thoughts by themselves, if never uttered to others, would be impossible to identify through open sources. Although suicidal talk is correlated with suicide attempts, it is not a strong predictor of suicide attempts. Many individuals who discuss suicide will never attempt to commit suicide. Thus, suicidal gestures (like documented past suicide attempts examined here) are more predictive of future suicide attempts than suicidal talk.[68]

That suicide attackers may be more likely than non-suicide offenders to be younger and to be substance abusers matches the characteristics of many regular street crime offenders who often commit their crimes impulsively.[69] We wonder if suicide attackers are also impulsively responding to personal or group-related grievances.[70] The substance abuse could offer an escape from the frustration and dysfunction they face as a result of their grievance. Relatedly, it is possible that the substance abuse increases attackers' impulsivity and undermines their inhibitions, thus resulting in the suicide attack. Future research should engage these important questions. Since this study only identified 56 suicide attackers in the United States, detailed case studies could prove useful. In addition, considering the distribution of these attributes as presented in Table 4, we see that those fitting the broad definition more often had a history of substance abuse, but less often were under the age of 25. This variation within suicide mission perpetrators underlines the importance of further inquiry into the subject. It is also important to note that far-right offenders overall were significantly more likely than the AQAM perpetrators to be under the age of 25.

We also found that suicide attackers were more likely than non-suicide attackers to be unaffiliated terrorists who committed their suicide attack alone. On the one hand this could seem surprising. A consistent conclusion of the suicide terrorism literature is that suicide attacks are launched by organizations. We could not locate a single empirical study that supported the opposing view that suicide attacks may not originate from an organized campaign, but are more likely to be committed by lone terrorists acting on their own initiative. This finding, however, was foreseeable for United States-centric data. The far-right and AQAM movements in the United States lack the infrastructure of well-established, long-lasting insurgent groups like Hamas, the PKK, or the LTTE that have launched previous suicide campaigns. Indeed, consistent with this, our sub-analysis found that loners were more likely to commit suicide attacks that only satisfied the broad definition of a suicide attack. It could be that these loners, unlike organizations, lacked the resources (such as explosives) that would be necessary to carry out attacks that satisfied the narrow suicide attack definition.

Some earlier campaigns, like the insurgency against the American forces in the Philippines, included suicide attacks committed by loners. Interestingly, in the summer of 2014, the Israeli army launched a crackdown on Hamas in the West Bank that many claimed severely hampered its infrastructure in that territory. Subsequently, during the past year, a number of attacks have been launched by lone, unaffiliated Palestinians from the West Bank and East Jerusalem that involved stabbing attacks or cars running over people where the attackers did not expect to survive.[66] Future research could explore which if any environmental factors are associated with loner attacks as opposed to an organized suicide attack campaign. In the United States, this research would examine why

the AQAM and far-right movements are more diffused and lack the established infra-structures of the insurgent organizations formed in these other countries.

Another explanation for why loners are more likely to engage in suicide attacks could be pragmatism. An individual, without the support of compatriots, decreases the chance of survival when attempting to engage in violent acts. Perhaps they simply accept the fact that to be successful, with the limited backing and means at their disposal, they will probably be killed. Finally, acting by oneself or in conjunction with others might not be a decision made by the offender. Terrorist groups, whether formal or otherwise, also have agency in determining who they will, or will not, accept into their ranks. There may be characteristics specific to lone offenders that make them undesirable to these groups. In addition, the groups may determine that suicide attacks are not an appropriate form of warfare, forcing those who are willing or even want to die for the cause to act on their own.

The loner finding raises important issues for law enforcement. Attacks committed by loners are more difficult to prevent than those committed by organizations. Loners are said to "fly below the radar" and are better able to avoid detection before the attacks are committed. This finding also illustrates the importance of Merari's point about the need to examine suicide perpetrators in a variety of conflicts. Merari[71] explains that,

> a major methodological limitation of the current explanations of suicide terrorism stems from limited empirical evidence, as authors support their assertions with data culled mostly on Palestinian suicides and (much less) on suicides in Lebanon. These specific empirical data cannot be readily generalized to suicide terrorists in other places.

This study responded to this call and demonstrated that a consistent finding of the prior literature that links suicide offenders to organizations did not hold in the American context.

We also showed that unlike previous research on Middle Eastern suicide attacks, perpetrators' level of education, deprivation status, and marital status had no significant impact on the odds of an offender being a suicide attacker when controlling for the other variables in the model. We conducted a sensitivity analysis that examined whether far-right and AQAM suspects differed while controlling for whether they engaged in a suicide mission. The findings indicated that far-rightists were significantly more likely to be economically deprived, and were significantly less likely to have received a high school degree. Both of these findings converge with prior research that has consistently found American far-right terrorists to be worse off economically and less educated than other terrorists, as well as the general population.[72] In addition, this analysis found that far-rightists were less likely than AQAM suspects to be married, which makes sense since, as discussed, far-rightists were more likely to be younger (under age 25).

At the bivariate level, that male terrorists were no more likely to engage in suicide attacks than non-suicide attacks is surprising. For marital status, the lack of support for suicide offenders being more likely to be single could perhaps be explained by our loner findings. Many explanations of the unmarried thesis argue that *terrorist groups and organizations* seek out and recruit unmarried persons to commit suicide attacks. Such individuals are thought to have weaker social ties, which makes them more vulnerable to recruitment into suicide missions. We have demonstrated, though, that in the U.S. most suicide attackers are loners who plan and commit attacks alone.

It is possible that this study's use of the broader operationalization of suicide attacker may be responsible for some of the other differences between our study's findings and prior empirical investigations. Since close to 60 percent of this study's suicide attackers only met the broader definition of suicide attacker, it highlights that the American experience with suicide attacks varies from foreign conflicts where the majority of suicide missions satisfy the narrow definition. Indeed, the far-right movement, perhaps, clearly represents the uniqueness of the American context. Only one of the 14 far-right suicide attackers we identified satisfied the narrow definition of suicide attacker, while the other 13 only satisfied the broad definition. It is important for future studies to mimic our strategy to see if the broader definition of suicide attack captures more cases and if their inclusion undermines the findings of prior research. Researchers should be aware of differences that may exist across countries, ideologies (far-right versus AQAM versus other ideologies) and conflicts regarding the suicide attack phenomenon.

This study also found that suicide perpetrators were more likely to have served in the military and participated in paramilitary training. For military service, this difference was driven solely by perpetrators meeting the broad definition, while offenders meeting the narrow definition drove the difference for movement or paramilitary training. Similarly, our sub-analysis indicated that AQAM terrorists were significantly more likely than far-rightists to have received movement-related training, while the far-rightists were significantly more likely to have had military service. These findings make intuitive sense based upon the opportunities available to these two types of terrorists. Since far-right offenders were more likely to be U.S. citizens, military service in the U.S. army seems more available to them, while AQAM offenders should have greater access, especially abroad, to paramilitary and other specialized trainings.

Suicide attackers were also more ideologically committed to the cause than non-suicide terrorists, a difference driven by perpetrators meeting the narrow definition. The hypotheses that predicted these results were based upon the idea that suicide attackers are willing to sacrifice their life because they are more committed to the cause. They are also seen as more capable, which may be in part why they enlist, volunteer, or are chosen to receive military and paramilitary training, prior to committing suicide attacks. Far-rightist terrorists, interestingly, were also significantly more likely than AQAM suspects to be strongly committed to their extremist ideology. This finding illustrates the importance for future research to disaggregate terrorists and to further document, and explain, differences across individual terrorists based upon ideology.

Coupled with the results of the loner hypothesis, we see that well-trained, ideologically motivated individuals are much more likely to engage in suicide attacks, whether self-selected or selected by a group. We also found that AQAM offenders were significantly more likely than far-right terrorists to have engaged in a suicide mission. With the current focus on foreigners, including Americans, traveling to Syria and Iraq to receive training and to fight on behalf of AQAM movements (e.g., ISIS), our findings appear relevant. Observers have expressed concern that these fighters supporting AQAM may return and then commit attacks in their homeland. Law enforcement and policy makers may want to make use of the findings of this study, including that suicide attackers are more likely to have served in the military and to have received training.

These findings, albeit policy and conceptually relevant, have limitations. Although we are expanding the study of suicide terrorism outside of traditional conflicts and into the United States, our results can only speak to the phenomenon over the last 25 years. To confirm the applicability of our findings outside of the American context, similar analyses should be conducted in other conflicts that have not yet been examined. It is important for future research to investigate if our findings are unique to the American context. Our study focused on not just Al Qaeda supporters, but far-rightists, and not just the narrowly defined suicide attackers, but also included offenders who only satisfied the broad definition of suicide attackers. Future studies on suicide terrorism in Israel, for instance, could also include far-right Jewish terrorists who committed attacks while realizing that they would not survive (such as the mass killing at the Tomb of the Patriarchs by a far-right terrorist on February 25, 1994). These studies could also include Palestinian attackers who only satisfied the broad definition. Such studies, by expanding upon the ideologies included, and by encompassing both broad and narrow suicide attackers, would allow researchers to replicate our models and study if our findings apply to other contexts or if in fact the American case is unique.

A second limitation is that the variables we used to operationalize each hypothesis are dichotomous, limiting our ability to speak only about the impact of the presence or absence of each trait. Again, we coded our measures dichotomously to minimize missing values. Nonetheless, future research should attempt to capture a larger range in measuring these traits. Also, due to data limitations, the lack of far-right plots in our sample limits the applicability of our results. Although we controlled for these missing cases through the inclusion of the far-right and homicide incident variables, there is no way to determine how, if at all, the addition of the far-right plots might alter our findings.

Conclusion

This study adds to the understanding of suicide terrorism by being the first to compare suicide to non-suicide attackers in the United States. We investigated whether suicide attackers were more likely to have exhibited several specific risk factors for suicidality in addition to a series of other predictions about the correlates of suicide terrorism. The model demonstrated limited support for the hypothesis that suicide attackers are more likely to be suicidal but did find that suicide attackers were more likely to have military and movement-related training, and to be more committed to their ideology. Interestingly, we found that suicide attackers were more likely to act alone and not be involved with either formal or informal organizations, the opposite of what prior research has found. We hope that future research builds off our results and finds new and better ways to operationalize and test key explanatory frameworks to help us better understand suicide terrorism.

Acknowledgments

30 directly and through the National Consortium for the Study of Terrorism and Responses to Terrorism (START). The views and conclusions contained in this document are those of the authors and should not be interpreted as necessarily representing the official policies, either expressed or implied, of DHS or START

Notes

1. This paper uses the terms *suicide attack/mission, suicide perpetrator/attacker/offender*, and *suicide terrorism* because most researchers employ these phrases when discussing acts where a person takes their own life—or expects to be killed—while attacking others to further their ideological beliefs. A few researchers eschew the word *suicide* and instead use martyrdom, as suicide denotes an association with despair while martyrdom highlights self-sacrifice and courage. Salafist Islamist terrorists agree, arguing that such acts are *istishad*, or martyrdom in service to Allah as suicide is prohibited by the Koran.
2. David S. Carter, Steven M. Chermak, Jeremy Carter, and Jack Drew, "Understanding Law Enforcement Intelligence Processes" (Report to the Office of University Programs, Science and Technology Directorate, U.S. Department of Homeland Security, START, College Park, MD, 2014); Joshua D. Freilich, Steven M. Chermak, and Joseph Simone, Jr., "Surveying American State Police Agencies about Far-right and Islamic Jihadist Criminal Collaboration, Terrorism Threats, Terrorism Sources, and Terrorism Definitions," *Terrorism and Political Violence* 21, no. 3 (2009): 450–75.
3. Jeffrey W. Lewis, "Precision Terror: Suicide Bombings as Control Technology," *Terrorism and Political Violence* 19, no. 2 (2007): 223–45; Luca Ricolfi, "Palestinians, 1981–2003," in *Making Sense of Suicide Missions*, edited by Diego Gambetta (New York: Oxford University Press, 2006), 77–129.
4. Scott Atran, "The Moral Logic and Growth of Suicide Terrorism," *The Washington Quarterly* 29, no. 2 (2006): 127–47.
5. James R. Liddle, Lance S. Bush, and Todd K. Shackelford, "An Introduction to Evolutionary Psychology and Its Application to Suicide Terrorism," *Behavioral Sciences of Terrorism and Political Aggression* 3, no. 3 (2011): 176–97; Clark McCauley and Sophia Moskalenko, *Friction: How Radicalization Happens to Them and Us* (New York: Oxford University Press, 2011); Ariel Merari, *Driven to Death: Psychological and Social Aspects of Suicide Terrorism* (New York: Oxford University Press, 2010); Assaf Moghadam, *The Globalization of Martyrdom: Al Qaeda, Salafi Jihad and the Diffusion of Suicide Attacks* (Baltimore, MD: Johns Hopkins University Press, 2008); Bridget R. Nolan, "The Effects of Cleric Statements on Suicide Bombings in Pakistan, 2000–2010," *Studies in Conflict and Terrorism* 36, no. 3 (2013): 219–34; Robert A. Pape, *Dying to Win: The Strategic Logic of Suicide Terrorism* (New York: Random House, 2005).
6. P. Baker, "Relief over U.S. Exit from Iraq Fades as Reality Overtakes Hope," *New York Times*, http://www.nytimes.com/2014/06/23/world/middleeast/relief-over-us-exit-from-iraq-fades-as-reality-overtakes-hope.html (accessed June 22, 2014).
7. Mia Bloom, *Dying to Kill: The Allure of Suicide Terror* (New York: Columbia University Press, 2005); Ami Pedhazur, *Suicide Terrorism* (Malden, MA: Polity, 2005).
8. Nassra Hassan, "An Arsenal of Believers: Talking to the Human Bombers," *The New Yorker, Online* (2001), http://www.newyorker.com/magazine/2001/11/19/an-arsenal-of-believers; Bruce Hoffman, "The Logic of Suicide Terrorism," *The Atlantic, Online* (2003), http://www.theatlantic.com/magazine/archive/2003/06/the-logic-of suicide-terrorism/302739/; Bruce Hoffman and Gordon H. McCormick, "Terrorism, Signaling, and Suicide Attack," *Studies in Conflict & Terrorism* 27 (2004): 243–81; Merari, *Driven to Death* (see note 5 above); Pape, *Dying to Win* (see note 5 above); but see Max Abrahms, "The Political Effectiveness of Terrorism Revisited," *Comparative Political Studies* 45, no. 3 (2012): 366–93.
9. Merari, *Driven to Death* (see note 5 above).
10. Scott Ashworth, Joshua D. Clinton, Adam Meirowitz, and Kristopher W. Ramsay, "Design, Inference, and the Strategic Logic of Suicide Terrorism," *American Political Science Review*

102, no. 2 (2008): 269–73; Martha Crenshaw, "Explaining Suicide Terrorism: A Review Essay," *Security Studies* 16, no. 1 (2007): 133–62; Merari, *Driven to Death* (see note 5 above).

11. Adam Lankford, "Could Suicide Terrorists Actually Be Suicidal?," *Studies in Conflict & Terrorism* 34 (2011): 337–66; Adam Lankford, "Precis of the Myth of Martyrdom: What Really Drives Suicide Bombers, Rampage Shooters and Other Self-Destructive Killers," *Behavioral and Brain Science* 37 (2014): 351–62.

12. Merari, *Driven to Death* (see note 5 above).

13. James A. Piazza, "A Supply Side View of Suicide Terrorism: A Cross-National Study," *Journal of Politics* 70, no. 1 (2008): 28–39; Katherine R. Seifert and Clark McCauley, "Suicide Bombers in Iraq, 2003–2010: Disaggregating Targets Can Reveal Insurgent Motives and Priorities," *Terrorism & Political Violence* 26, no. 5 (2014): 803–20.

14. Merari, *Driven to Death* (see note 5 above); Ami Pedahzur, Arie Perlinger, and Leonard Weinberg, "Altruism and Fatalism: The Characteristics of Palestinian Suicide Bombers," *Deviant Behavior* 24 (2003): 405–23; Leonard Weinberg, Ami Pedahzur, and Daphne Canetti-Nism, "The Social and Religious Characteristics of Suicide Bombers and Their Victims," *Terrorism and Political Violence* 15, no. 3 (2003): 139–53.

15. Bloom, *Dying to Kill* (see note 7 above); Ariel Merari, "Social, Organisational and Psychological Factors in Suicide Terrorism," in *Root Causes of Terrorism: Myths, Reality and Ways Forward*, edited by Tore Bjørgo (New York: Routledge, 2005), 70–86.

16. Efraim Benmelech and Claude Berrebi, "Human Capital and the Productivity of Suicide Bombers," *Journal of Economic Perspectives* 21, no. 3 (2007): 223–38; Robert J. Brym and Bader Araj, "Are Suicide Bombers Suicidal?," *Studies in Conflict & Terrorism* 35 (2012): 432–43; Diego Gambetta, ed., *Making Sense of Suicide Missions* (New York: Oxford University Press, 2006); Riaz Hassan, *Life as a Weapon: The Global Rise of Suicide Bombings* (New York: Routledge, 2010); Sophia Moskalenko, "Book Review: Adam Lankford. *The Myth of Martyrdom: What Really Drives Suicide Bombers, Rampage Shooters, and Other Self-Destructive Killers*. New York: Palgrave Macmillan. 2013," *Terrorism & Political Violence* 25, no. 5 (2014): 840–43; Jessica Stern, *Terror in the Name of God: Why Religious Militants Kill* (New York: HarperCollins, 2003).

17. Pape, *Dying to Win* (see note 5 above), 172.

18. Stephen Holmes, "Al Qaeda, 11 September 2001," in Diego Gambetta, ed., *Making Sense of Suicide Missions* (New York: Oxford University Press, 2006), 131–72; David Lester, Bijou Yang, and Mark Lindsay, "Suicide Bombers: Are Psychological Profiles Possible?," *Studies in Conflict & Terrorism* 27, no. 4 (2004): 283–95.

19. Lankford 2011; 2014 (see note 11 above); Adam Lankford, "Mass Shooters in the USA, 1966–2010: Differences between Attackers Who Live and Die," *Justice Quarterly* 32, no. 2 (2013): 360–79.

20. Lankford's conclusion that suicide terrorists are indeed suicidal is based upon comparisons of suicide terrorists to persons committing "regular" suicide, non-terrorists who commit murder/suicide, sacrificial heroes, and other categories of persons. He did not, however, examine a comparison group of suicide terrorists and non-suicide terrorists. The current study extends his important research by making such a comparison.

21. Holmes (see note 18 above).

22. Holmes (see note 18 above), 137.

23. Merari, *Driven to Death* (see note 5 above).

24. Anat Berko and Edna Erez, "Ordinary People and Death Work: Palestinian Suicide Bombers as Victimizers and Victims," *Violence and Victims* 20, no. 6 (2005): 603–23; Gambetta, *Suicide Missions* (see note 16 above); Hoffman (see note 8 above); Merari, *Driven to Death* (see note 5 above); Pedahzur, *Suicide Terrorism* (see note 7 above).

25. Boaz Ganor, "The Rationality of the Islamic Radical Suicide Phenomenon," in *Countering Suicide Terrorism* (Israel: The International Policy Institute for Counter-Terrorism (ICT) at the Interdisciplinary Center, 2000), 5–11.

26. Chris Dishman, "The Leaderless Nexus: When Crime and Terror Converge," *Studies in Conflict & Terrorism* 28, no. 3 (2005): 237–52.

27. Alan B. Krueger and Jitka Maleckova, "Education, Poverty and Terrorism. Is There a Causal Connection?," *Journal of Economic Perspectives* 17, no. 4 (2003): 119–44.

28. Chrisopher Hewitt, *Understanding Terrorism in America: From the Klan to Al Qaeda* (New York: Routledge, 2003); Brent L. Smith, *Terrorism in America: Pipe Bombs and Pipe Dreams* (New York: State University of New York Press, 1994).

29. Stern, *Terror in the Name of God* (see note 16 above).

30. Ganor (see note 26 above); Pedhazur et al. (see note 14 above); Weinberg et al. (see note 14 above).

31. Benmelech and Berrebi (see note 16 above); Gambetta, *Suicide Missions* (see note 16 above); Krueger and Maleckova (see note 28 above).

32. Merari, *Driven to Death* (see note 5 above).

33. Simon Perry and Badi Hasisi, "Rational Choice Rewards and the Jihadist Suicide Bomber," *Terrorism and Political Violence* 27, no. 1 (2015): 5380; Weinberg et al. (see note 14 above).

34. David Cook, "Suicide Attacks or 'Martyrdom Operations' in Contemporary Jihad Literature," *Nova Religio* 6, no. 1 (2002): 7–44.

35. Regelio Alonso and Fernando Reinares, "Maghreb Immigrants Becoming Suicide Terrorists: A Case Study on Religious Radicalization in Spain," in *Root Causes of Suicide Terrorism: The Globalization of Martyrdom*, edited by A. Pedahzur (New York: Routledge, 2006): 179–97.

36. Gambetta, *Suicide Missions* (see note 16 above); Merari, *Driven to Death* (see note 5 above); Pedhazur et al. (see note 14 above); Pape, *Dying to Win* (see note 5 above); Weinberg et al. (see note 14 above).

37. Bloom, *Dying to Kill* (see note 7 above); Gambetta, *Suicide Missions* (see note 16 above); Merari, *Driven to Death* (see note 5 above); Pedhazur et al. (see note 14 above).

38. Pedhazur, *Suicide Terrorism* (see note 7 above).

39. Rohan Gunaratna, "Suicide Terrorism in Sri Lanka and India," in *Countering Suicide Terrorism* (Israel: The International Policy Institute for Counter-Terrorism (ICT) at the Interdisciplinary Center, 2000), 68–72.

40. Pedhazur, *Suicide Terrorism* (see note 7 above).

41. Yoram Schweitzer, "Al-Qaeda and the Global Epidemic of Suicide Attacks," in *Root Causes of Suicide Terrorism: The Globalization of Martyrdom*, edited by Ami Pedahzur (New York: Routledge, 2006), 132–51.

42. Arie Kruglanki, Xiaoyan Chen, Mark Dechesne, Shira Fishman, and Edward Erehek, "Fully Committed: Suicide Bombers' Motivation and the Quest for Personal Significance," *Political Psychology* 30, no. 3 (2009): 331–57.

43. Gunaratna (see note 40 above); Pape, *Dying to Win* (see note 5 above); Pedhazur, *Suicide Terrorism* (see note 7 above); but see Marc Sageman, *Understanding Terrorist Networks* (Philadelphia: University of Pennsylvania, 2004).

44. AQAM supporters are operationalized as individuals who believe that only acceptance of the Islamic faith promotes human dignity and affirms God's authority. They reject the traditional Muslim respect for "People of the Book" (i.e., Christians and Jews). They believe that "Jihad," meaning to struggle in the path of God in the example of the Prophet Muhammad, is a defining belief in Islam and that "lesser Jihad" endorses violence against the "corrupt." Jihadists believe that the Islamic faith is oppressed in both "local and nominally Muslim" governments as well as in non-Islamic nations that occupy indigenous Islamic populations. In addition, the West supports the corruption, oppression, and humiliation of Islam, and exploits the region's resources. They believe that the hedonistic culture of the West (e.g., gay-rights, feminism, sexual permissiveness, alcohol abuse, racism, etc.) has a corrosive effect on Muslim social and religious values. For Jihadists, it is a religious obligation to promote a violent Islamic revolution to combat this assault on Islam by targeting nonbelievers (both Muslims and non-Muslims). They believe that Islamic law, or Sharia law, provides the ideal blueprint for a modern Muslim society and should be implemented in all "Muslim" countries by force. Global jihadists are most concerned with combating the West and the United States in particular, while local jihadists focus on specific regional conflicts. Please see Joshua D. Freilich, Steven M. Chermak, Roberta Beli, Jeff Gruenewald, and William S. Parkin,

"Introducing the United States Extremist Crime Database (ECDB)," *Terrorism and Political Violence* 26, no. 2 (2014): 372–84.

45. Crenshaw (see note 10 above), 162.

46. Far-right supporters are operationalized as individuals or groups that subscribe to aspects of the following ideals: "[far-rightists are] fiercely nationalistic (as opposed to universal and international in orientation), anti-global, suspicious of centralized federal authority, reverent of individual liberty (especially their right to own guns, be free of taxes), believe in conspiracy theories that involve a grave threat to national sovereignty and/or personal liberty and a belief that one's personal and/or national 'way of life' is under attack and is either already lost or that the threat is imminent (sometimes such beliefs are amorphous and vague, but for some the threat is from a specific ethnic, racial, or religious group), and a belief in the need to be prepared for an attack either by participating in or supporting the need for paramilitary preparations and training or survivalism. Importantly, the mainstream conservative movement and the mainstream Christian right are not included." See Freilich et al. (see note 45 above).

47. Secular Middle Eastern nationalists are operationalized as individuals who believe that certain Middle Eastern nations they identify with are either oppressed by a "local usurper" government that is corrupt and authoritarian, or occupied and/or under attack from the West in general or the United States in particular. They also believe that the West in general and the United States in particular supports the corruption, oppression, and humiliation of this nation and exploits its resources. In addition, the citizens of the West and the United States are responsible for their government's actions and their society's culture. These terrorists also maintain that action must be taken to combat this assault, oppression, and corruption. Their goal is independence from the West and the United States. See Freilich et al. (see note 45 above).

48. Assaf Moghadam, "Defining Suicide Terrorism," in *Root Causes of Suicide Terrorism: The Globalization of Martyrdom*, edited by Ami Pedahzur (New York: Routledge, 2005), 16.

49. Weinberg et al. (see note 14 above), 139.

50. Pedahzur et al. (see note 14 above), 413; see also Merari, *Driven to Death* (see note 5 above).

51. Seifert and McCauley (see note 13 above).

52. Ariel Merari, "The Readiness to Kill and Die: Suicidal Terrorism in the Middle East," in *Origins of Terrorism: Psychologies, Ideologies, Theologies, States of Mind*, edited by Walter Reich (Baltimore, MD: Johns Hopkins University Press, 1990), 192–207, 192.

53. Merari, *Driven to Death* (see note 5 above).

54. Cook (see note 35 above), 18.

55. Freilich et al. (see note 45 above).

56. Steven M. Chermak, Joshua D. Freilich, William S. Parkin, and James P. Lynch, "American Terrorism and Extremist Crime Data Sources and Selectivity Bias: An Investigation Focusing on Homicide Events Committed by Far-Right Extremists," *Journal of Quantitative Criminology* 28, no. 1 (2012): 191–218.

57. Steven M. Chermak, Joshua D. Freilich, and Michael J. Suttmoeller, "The Organizational Dynamics of Far-Right Hate Groups in the United States: Comparing Violent to Non-Violent Organizations," *Studies in Conflict and Terrorism* 36, no. 3 (2013): 193–218; Joshua D. Freilich, Steven M. Caspi, and David J. Caspi, "Critical Events in the Life Trajectories of Domestic Extremist White Supremacist Groups: A Case Study Analysis of Four Violent Organizations," *Criminology and Public Policy* 8, no. 3 (2009): 497–530; Michael J. Suttmoeller, Steven M. Chermak, and Joshua D. Freilich, "The Influence of External and Internal Correlates on the Organizational Death of Domestic Far-Right Extremist Groups," *Studies in Conflict and Terrorism* 38, no. 9 (2015): 734–58.

58. Joshua D. Freilich and Steven M. Chermak, "Preventing Deadly Encounters between Law Enforcement and American Far-Rightists," *Crime Prevention Studies* 25 (2009): 141–72.

59. Steven M. Chermak and Jeffrey Gruenewald, "Laying the Foundation for the Criminological Examination of Right-Wing, Left-Wing, and Al Qaeda Inspired Extremism in the United States," *Terrorism & Political Violence* 27, no. 1 (2015): 133–59; Joshua D. Freilich, Amy Adamczyk, Steven M. Chermak, Katherine Boyd, and William S. Parkin, "Disorganization,

Diversity and Deadly Far-Right Ideological Violence: A County Level Analysis," *Journal of Quantitative Criminology* 31, no. 3 (2015): 383–411.

60. Brittany E. Hayes, Joshua D. Freilich, and Steven M. Chermak, "An Exploratory Study of Honor Crimes in the United States," *Journal of Family Violence* 31, no. 3 (2016): 303–14.
61. Offenders who were involved in multiple homicide incidents or plots were only counted once. Also, offenders who were not adherents to the extreme ideologies under study, regardless of whether they acted in conjunction with terrorists, were removed. Finally, we excluded far-right offenders of foiled plots since the data collection and coding of this part of the ECDB is still in progress.
62. We do not provide the suicide attackers' names or the events' locations to protect individual privacy and to satisfy the funder's conditions.
63. Benmelech and Berrebi (see note 16 above); Gambetta, *Suicide Missions* (see note 16 above); Pedhazur, *Suicide Terrorism* (see note 7 above); Weinberg et al. (see note 14 above).
64. We are indebted to Dr. Sophia Moskalenko for feedback on the points made in the next two paragraphs. Any mistakes though, are solely ours.
65. Pedhazur et al. (see note 14 above).
66. Lankford 2011; 2014 (see note 11 above).
67. Moskalenko (see note 16 above); E. Robbins, S. Gassner, J. Kayes, R. H. Wilkinson, Jr., and G. E. Murphy, "The Communication of Suicidal Intent: A Study of 134 Consecutive Cases of Successful (Completed) Suicide," *The American Journal of Psychiatry* 115, no. 8 (1959): 724–33.
68. We thank Dr. Shuki Cohen for his insight on this point.
69. Robert Anew, "A General Strain Theory of Terrorism," *Theoretical Criminology* 14, no. 2 (2010): 131–53; see also McCauley and Moskalenko (see note 5 above).
70. Avi Issacharoff, "Suicide Terrorism Returns to Jerusalem with a Difference" (2014): *Times of Israel*, http://www.timesofisrael.com/it-may-not-be-a-third-intifada-but-its-end-is-nowhere-in-sight/ (accessed March 15, 2017)
71. Merari, *Driven to Death* (see note 5 above), 226.
72. See for example Freilich et al. (see note 60 above); Jeffrey A. Gruenewald, Steven M. Chermak, and Joshua D. Freilich, "Distinguishing 'Loner' Attacks from Other Domestic Extremist Violence: A Comparison of Far-Right Homicide Incident and Offender Characteristics," *Criminology and Public Policy* 12, no. 1 (2013): 65–91; Jeffrey S. Handler, "Socioeconomic Profile of an American Terrorist," *Terrorism* 13, no. 3 (1990): 195–213; Hewitt (see note 29 above); Smith, *Terrorism in America* (see note 29 above).

Appendix 1: Suicide attackers in the United States, 1990–2013

Year	# Attackers (N = 56)	Ideology	Brief description	Narrow (N = 25)	Broad (N = 31)
1993	1	AQ	Shooting attack killed 2 and wounded others		X
1995	1	FR	Truck bomb attack killed 168 people and wounded others		X
1996	1	FR	Racist shooting attack killed 1 and wounded others. Offender then killed himself		X
1997	1	Secular nationalist	Shooting attack (to protest Israeli policies) killed 1 and wounded others. Offender then committed suicide		X
1997	2	AQ	Planned suicide bombing of subway is prevented		X
1999	1	FR	Shooting in church killed 7 and wounded others. Offender then committed suicide		X
1999	1	FR	Racist shooting spree killed two people and wounded others. Offender then committed suicide		X
1999	2	FR	Shooting killed 13 and wounded others. Offenders then committed suicide		X
2001	5	AQ	Airliner attack killed and injured thousands	X	
2001	5	AQ	Airliner attack killed and injuring thousands	X	
2001	5	AQ	Airliner attack killed 184 and injured others	X	
2001	4	AQ	Airliner attack killed 40	X	
2001	1	AQ	Attempt to blow up plane in mid-flight	X	
2002	1	AQ	Small plane crashed into the side of a bank	X	
2002	1	AQ	Planned bombing attack on FBI agents and prosecutors		X
2002	1	FR	After a car chase a shootout killed one officer and the offender. Another officer was wounded		X
2003	1	FR	Shooting attack killed 6 and wounded others. Offender then committed suicide		X
2005	1	AQ	Offender blows himself up outside a stadium	X	
2006	1	AQ	Car attack wounds nine		X
2007	1	AQ	Offender attacks installation in suicide by cop attempt		X
2008	1	FR	Shooting attack killed two and wounded others		X
2009	1	FR	Shooting attack kills officer		X
2009	1	FR	Shooting spree kills two, and wounds one		X
2009	1	AQ	Attempt to blow up plane in mid-flight	X	
2009	1	AQ	Offender killed by police during raid		X
2009	1	AQ	Planned suicide attack		X
2009	1	AQ	Planned suicide attack		X
2010	1	AQ	Planned suicide attack		X
2010	1	FR	Plane flown into building and kills one along with the offender	X	
2010	1	FR	Shooting attack kills 1 and wounds others. Offender then committed suicide		X
2011	2	AQ	Planned shooting attack		X
2012	1	AQ	Planned suicide attack		X
2012	1	AQ	In-route to detonate suicide bomb vest	X	
2012	1	AQ	Planned truck bombing		X
2013	2	AQ	Bombing kills 3 and wounds others		X
2013	1	FR	Shooting kills one and wounds others		X
2013	1	AQ	Attempted car bombing		X